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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,949	04/01/2005	Takayoshi Mamine	09812.0391-00000	5510

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EXAMINER

BABIC, CHRISTOPHER M

ART UNIT	PAPER NUMBER
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1637

MAIL DATE	DELIVERY MODE
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11/29/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/529,949	Applicant(s) MAMINE ET AL.	
	Examiner Christopher M. Babic	Art Unit 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 5-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/1/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of group I, claim(s) 1-4, in the reply filed on August 3, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Thus, the restriction requirement dated July 2, 2007 is hereby made FINAL. Claim(s) 5-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Information Disclosure Statement

It is noted that only the abstract, if present, of JP 2000-60554, JP 2002-250726, and JP 2003-526331 has been considered, as a copy/translation of the document has not been provided. The above references have been lined through on the accompanying PTO-1449.

Claim Interpretation

As an initial matter, Applicant is advised of the broad nature of the claimed invention. MPEP 2106 states, "The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope.

Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." As a result, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In the instant case, the phrases, "so as to fix a detecting material thereto", "for providing a place for an interaction between the detecting material fixed to the surface treated part and a target material", "for vibrating and exciting the cantilever", and "for detecting the amplitude of vibration of the cantilever" are considered intended uses of the required apparatus, and do not necessarily impart a limiting feature of the claimed method. For example, claim 1 does not necessarily require that the materials be fixed to the cantilever. Furthermore, the interaction may be that of any relationship between two materials (e.g. nucleic acid hybridization, protein-nucleic acid binding, etc.).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim(s) 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (U.S 5,807,758).

Lee teaches a method for detecting a target species (col. 3, lines 5-30, col. 7-8, for example), including that of nucleic acid (fig. 4; col. 6, lines 45-60, for example) that comprises: (1) the use of a detecting part (fig. 4) that comprises: a cantilever with a reaction surface (fig. 4, 12, for example); a driving source and vibration detecting means (col. 8, lines 30-40, piezoelectric resistive detection, for example).

2. Claim(s) 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Thundat (U.S 6,016,686).

Thundat teaches a method for detecting a target species (col. 2-3, 6-7, for example), including that of nucleic acid (col. 7, lines 5-10, for example) that comprises: (1) the use of a detecting part (fig. 2) that comprises: a cantilever with a reaction surface (fig. 2, 103, for example); a driving source and vibration detecting means (col. 9, lines 35-45, piezoelectric means, for example).

3. Claim(s) 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Quate et al. (U.S 6,203,981 B1).

Quate teaches a method for detecting hybridization of target nucleic acids (col. 5-6, for example) that comprises: (1) the use of a detecting part (fig. 1-4) that comprises: a cantilever with a reaction surface (fig. 1, 110); a driving source and vibration detecting means (col. 9, lines 35-45, piezoresistance means, for example). With specific regard to claim(s) 4, the detection methods of Quate, when used in conjunction with piezoresistive forces, appear to anticipate the "stretching" of the oligonucleotide target, i.e. the oligonucleotides are inherently stretched in the presence of piezoresistive forces.

Conclusion

Claim(s) 1-4 are rejected. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Babic whose telephone number is 571-272-8507. The examiner can normally be reached on Monday-Friday 7:00AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax

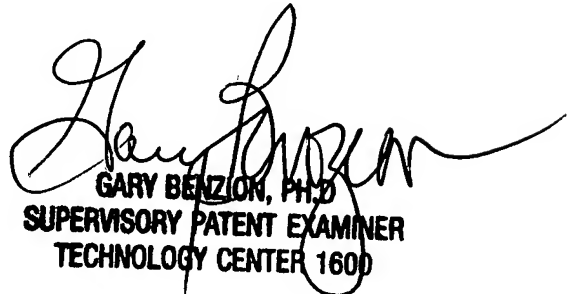
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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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